

ZFS snapshot visualization in GNOME

Source: http://blogs.sun.com/erwann/entry/zfs_on_the_desktop_zfs

Time slider is one of the new features that will be available in OpenSolaris 2008.11. Time slider provides an automatic way to backup your data on the same disc using one of Sun's ZFS file system unique features, snapshots.

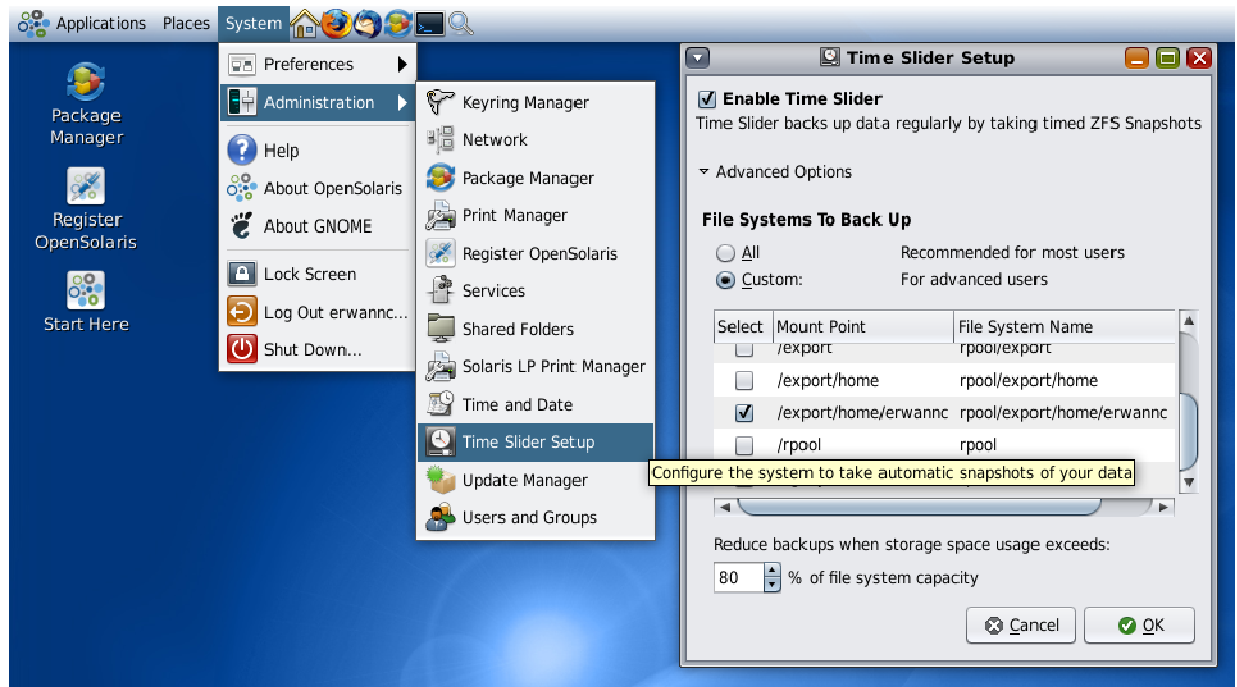
With time slider you can browse and recover files from snapshot backups using the GNOME file manager.

This feature is made on 3 separate components:

- The ZFS automatic Snapshots SMF services developed by Tim Foster :
These services are used by time slider to schedule recurring snapshots on ZFS files systems.
- The Time slider SMF service and UI developed by Niall Power:
This service determine when and which zfs file system to snapshot based on a set schedule (by default : at every boot, then every 15 minutes, then every hour, then every day, etc.)
These services also monitor the snapshotted file systems and avoid filling them up by removing the oldest snapshots based on a user predefined percentage of file system to be used.
- And finally the nautilus ZFS snapshot visualization integration developed by Erwann Chénédé's .
This part, explained below, allow the user to browse and restore files graphically using the GNOME file manager.

How to enable it ?

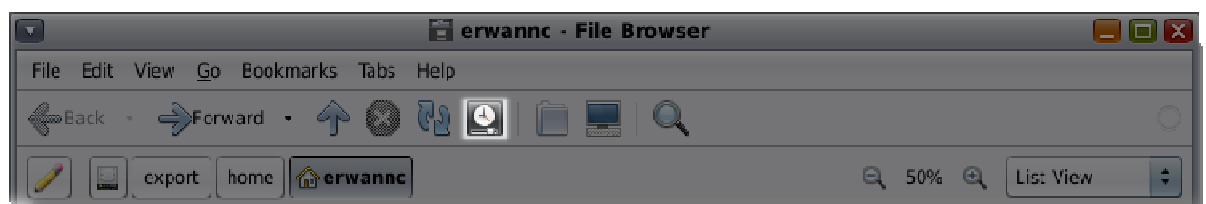
Time slider is disabled by default on OpenSolaris. You can enable it via System -> Administration -> time slider setup.



How to browse by snapshots?

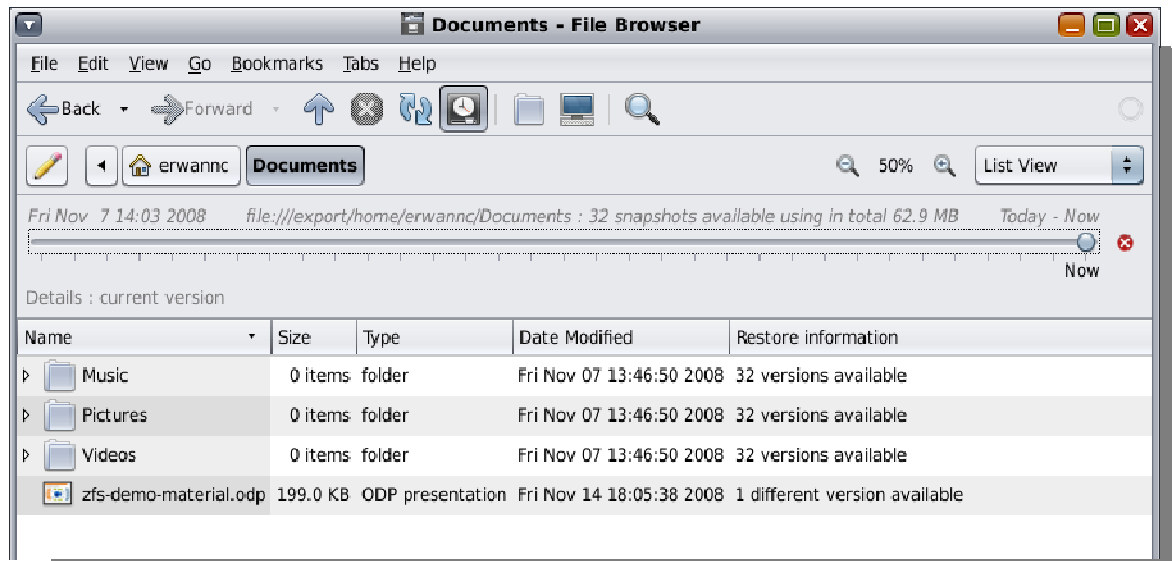
To browse your on-disk backups open any folder with the file manager and see if the restore icon is enabled (icon highlighted in the image below).

If it is enabled this means that backups of this directory are available.



Once pressed an additional navigation bar appears. It gives you information about:

- The timeline you can explore.
- your current location in the backup timeline (the image below shows that you are still browsing your current directory)
- The number of snapshot backups available for this directory and the space used by the overall zfs snapshots.



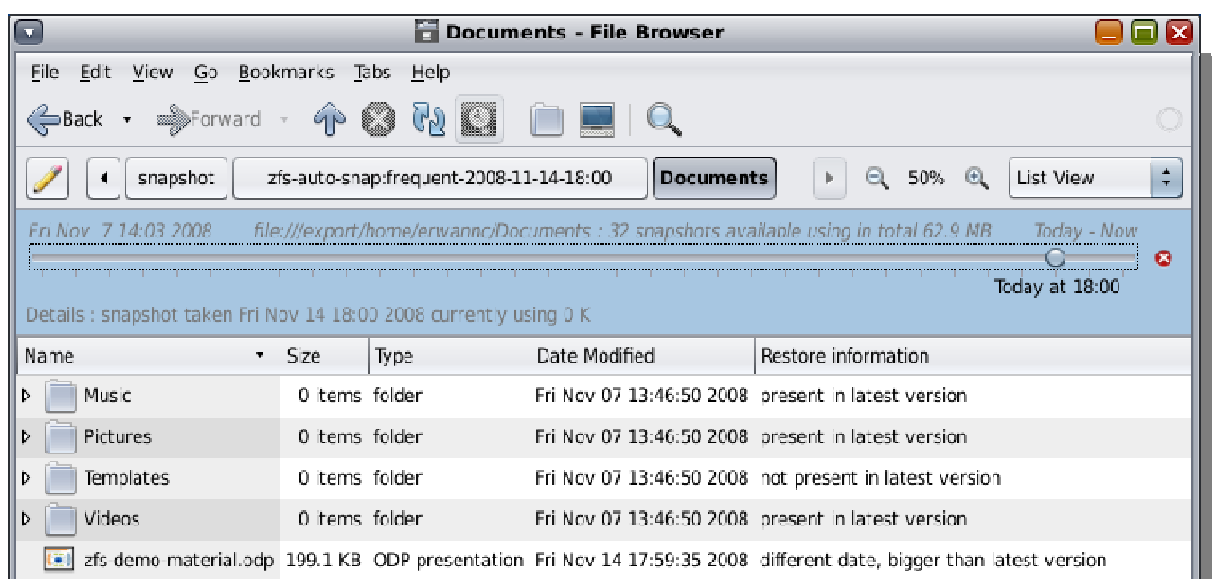
You can then drag the slider into the past to retrieve previous versions of your documents and folders.

You can open all your files in read only mode.

Note that if you browse in list view mode (as oppose to icon view) a "restore information" column automatically appears.

This column gives you contextual information about either:

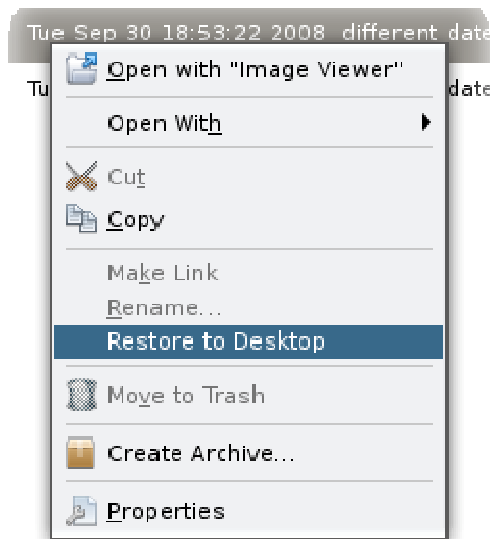
- The number of different version available for each file, if you browse in the current/latest version of a directory.
- The difference (if any exist) between the snapshotted file and the latest version of the file.



How do I restore files from backups?

You can restore previous versions of files and directories by either:

- Simply drag and dropping them into another file manager window.
- By right clicking on the mouse and selecting "restore to Desktop".
- Copy and pasting the selection to present time.



Note:

You can disable the zfs snapshot timeline visualization in nautilus via the global preferences dialog (menu edit->preferences).

Once in the dialog select the "Preview" tab and in the folder section uncheck "Visualize ZFS snapshots timeline".